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IOT FOR INSTRUMENTATION ENGINEERS

Instrumentation is one of the foundational blocks in the IoT ecosystem. The industrial instrumentation starts at the sensor level, where physical parameters like pressure, temperature, orientation, vibration, level, etc are measured and converted into current or voltage signals. These are then passed on to control systems.

There signals follow simple protocols like 0-20mA current signals, which get corrupted even over small distances. Even with digital protocols like Modbus, OPC, Canbus or Profibus the information remains localized. This is where the IoT paradigm plays an important role in converging the operational technologies with the information technologies using protocol converters and gateway devices like those from Moxa. IoT replaces the analog gauges and digital meters with a dynamic dashboard. Suddenly the control room becomes just another graphical user interface that can be accessed anytime from anywhere.

Operational data can be stored on IT systems where they can be analyzed for historical trends or for creating predictive models. This features improve the overall traceability in the system and mitigates risks by providing access to remote experts or by distributing the workload or making the system autonomous.

Capsule Labs is founded by IoT industry veterans and offers foundational IoT projects to develop a better understanding of IoT solution.